

SECTION IV. PROJECTS

“Projects” refers to activities to plan and implement specific recommendations of a Forest Management Plan.

In establishing project procedures, guidelines and practice specifications, MFS seeks to:

- Provide cost-share for a range of activities that help meet the landowner’s goals
- Ensure the involvement of a Stewardship Forester
- Encourage adequate planning, supervision, and monitoring for site-specific activities
- Promote the development of appropriate silvicultural prescriptions
- Allow for practice flexibility
- Provide guidelines to help meet the purposes of each practice
- Foster working relationships between landowners, private foresters, and MFS District Foresters

MFS District Foresters will review applications, Project Plans, field practices, and associated documentation, and will use their discretion to ensure appropriate practices.

Procedures: Projects

The following procedures are for Forest Management projects/practices eligible for cost-sharing (see list).

1. Applications – Projects
 - a. Landowners applying for cost-sharing of project planning and implementation practices must have an approved Forest Management Plan which is still current (i.e. the original planning period has not expired).
 - i. Landowners with previously approved MFS cost-shared plans (including those that may not meet current plan standards) will be eligible to apply for projects.
 - ii. Landowner with existing Forest Management Plans may be eligible to apply for projects, if the plans are found to meet current Forest Management Plan standards by the MFS District Forester.
 - iii. MFS may request copies of plans and/or other documentation of previous planning/cost-sharing.
 - b. Applications for projects will be submitted to the District Forester within one of the designated Application Periods. (Currently, June 2004, September 2004, January 2005).
 - c. All applications for projects must include the practice, “Project Plan”, identify the Stewardship Forester, and include an estimate of the amount of cost-share applied for, by practice/component and in total.
2. Conditional Approval of Project Application
 - a. MFS District Foresters will prioritize applications, based on established priority practices (see above) and available funds. District Foresters may exercise discretion in the extent and/or maximum payment of individual projects approved, or in the nature of projects approved as outlined in practice specifications.
 - b. District Foresters will approve projects conditionally, pending submission and approval of a Project Plan. District Foresters will notify landowners and Stewardship Foresters of project approval/denial within 2-4 weeks of the close of the practice period.
 - c. Applications not approved may be re-submitted in subsequent application periods.
3. Approval of Project Plan
 - a. Upon approval of the application, the Stewardship Forester may begin work on the Project Plan. (Specifications for Project Plan practice are found in a later section). A Project Plan meeting all requirements must be submitted to the MFS District Forester within 3 months of the initial application approval.

- b. The MFS District Forester must approve the Project Plan before other cost-share work to implement the practice may begin.
 - c. Project plans for some practices (esp. in the Canada Lynx Area and the 8 Atlantic Salmon Watersheds) may be subject to further review by the U.S. Fish and Wildlife Service under the Endangered Species Act. USFWS review may delay or preclude cost-sharing of such projects.
4. Performance period
- a. The performance period for all projects will be 12 months from the time of approval of the initial project application, unless otherwise designated by MFS.
 - b. MFS will provide one three month extension for expired projects, upon request and pending availability of funds, and notify the landowner and Stewardship Forester of the extension. Projects that are not completed at the end of the 3 month extension will be automatically cancelled and the funds de-obligated.
5. Cancellation
- a. Projects may be cancelled by the applicant at any time.
 - b. Projects may be cancelled by the Maine Forest Service at any time for non-completion of the Project Plan within the specified period. Projects may also be cancelled if, in the estimation of the District Forester, the project cannot be completed in manner that meets program specifications and/or the Project Plan specifications.
 - c. Landowners may re-apply for the uncompleted portions of cancelled projects. Landowners may not reapply for the completed portions of cancelled projects if no cost-share is received.
6. Claim for Payment/Certification of performance
- a. Upon completion of projects, landowners shall notify the Stewardship Forester. Project completion, in accordance with the Project Plan, and attainment of program standards shall be verified in the field for all practices by the Stewardship Forester.
 - b. Payments shall be made for completed projects only. No partial payments for individual project components will be made.
 - c. Incomplete practices may be cost-shared only upon determination by Maine Forest Service that at least 80% of the project has been successfully completed, and that such cost-share will provide substantial benefits in accordance with program objectives. However, such cost-share if approved shall constitute a final payment for the originally proposed practice.
 - d. Funds from cancelled practices will be made available to new applicants in subsequent application periods.
 - e. The Stewardship Forester shall assist the landowner by assembling and submitting all claim for payment documentation together to the MFS District Forester.
 - f. The following documentation will be required in order to claim payment for completed Projects:
 - i. A completed claim for payment form (provided by MFS), identifying the landowner, Stewardship Forester, total eligible practices (by practice component and treatment unit), and total project cost, and signed by the landowner.
 - ii. A copy of the approved Project Plan, and any subsequent revisions documenting additional work or modifications to the Project Plan.
 - iii. A Certification form, signed by the Stewardship Forester, that the project was completed in accordance with the Project Plan and meets program standards.
 - iv. An itemized list of all project costs, with the following supporting documentation:
 - 1. Services: Copies of the actual bill or bills (with the original bill date) for services presented to the landowner by the Stewardship Forester and/or by any contractor providing services eligible for cost-sharing

2. Materials: Receipts for needed project materials eligible for cost-sharing
 3. Labor: A day-to-day accounting of labor by the landowner to complete practices, and a statement of costs associated with that labor (at standard/reasonable rates).
- v. Proof of Payment. Proof of Payment for Projects consists of:
1. a copy of the cancelled check(s) (both sides), for all eligible costs incurred by the landowner, or
 2. a similar written record generated by the bank that clearly shows that funds in a given amount have been transferred by the landowner to the forester, other service provider(s), and/or providers of needed materials.

An Affidavit, on a form provided by MFS, may be submitted as proof of payment in lieu of the above documents if they are not readily obtainable. The Affidavit must itemize all eligible costs above and include check number(s) for all items (except landowner labor). The Affidavit must include the Stewardship Forester's signature attesting that payment for forester services has been received from the landowner, and that costs (to the best of the Forester's knowledge) are in accordance with the estimates provided in the Project Plan.

If payment for forester services is made in a form other than a check, a notarized statement signed by the forester asserting that payment has been received, and identifying the type and dollar value of payment, may substitute as proof of payment. In all cases, MFS reserves the right to request additional documentation.

- g. MFS Foresters will review completed projects in the field for adherence to program standards.
 - h. If Projects do not meet standards, the District Forester will inform the Stewardship Forester with the opportunity for correction.
 - i. Once the completed project has been approved, the District Forester will forward copies of the claim for payment form, and related documentation to the Augusta office. The documentation will be reviewed the Landowner Outreach Forester and, if complete, payment will be authorized. Cost-share reimbursement will be sent by Maine Forest Service.
7. Utilization of Forest Products:
- a. MFS encourages practices that meet the goals of the program and landowner objectives. It is not our intention to discourage practices that meet program guidelines but also produce some merchantable products. Such cases will be handled as described in this section.
 - b. No cost-share will be authorized for activities associated with the administration, marketing or similar aspects of commercial sales of forest products.
 - c. Cost-share may be authorized for activities directly related to the development and implementation of silvicultural prescriptions, and to meet associated purposes of specific practices. Accordingly, the MFS District Forester will consider Projects within the following guidelines:
 - i. Pre-commercial treatments: Such treatments may involve the utilization of less than 1 cord per treated acre, the removal of which is incidental to the implementation of the practice. Costs of removal of such products are not eligible for cost-sharing. Any such products may be for the landowner's personal use, but not for resale and/or processing for resale. MFS District Foresters will approve pre-commercial practices that otherwise meet practice specifications
 - ii. Below-cost treatments: Such treatments involve the removal and utilization of less than 5 cords per treated acre (on any treated acre), where the income from such utilization (at conventional rates for appropriate utilization) is less than the costs of planning/implementing the practice to achieve silvicultural ends. MFS District Foresters may approve such projects at their discretion, if adequate documentation of practice costs and income from the sale of forest products is provided. At a minimum, for such projects:
 1. Eligible costs will be proposed in advance, and documented upon completion, as outlined in practice specifications. Any cutting and removal of forest products needed to complete such practices will be performed on a service contract basis, identifying the cost of contracted services,

and including cost caps to preclude substantial cost overruns. Landowners who do eligible work themselves must specify the estimated actual costs of labor and related eligible costs, per unit and in total, at reasonable rates as determined by the MFS District Forester.

2. All income from the sale of forest products (i.e. roadside prices or mill-delivered prices less trucking) will be documented by the Stewardship Forester, to the satisfaction of the MFS District Forester, and will be used to offset eligible costs. Documentation shall include, at a minimum, copies of mill slips identifying the type of product(s), price per unit actually paid, quantity and method of scaling. By providing the documentation, the Stewardship is attesting that the information is accurate and complete.
3. Cost-share will be determined based on the rate for the practice, and the difference between project cost and project income, as show here:

Total (eligible) Project Cost – Total Documented Project Income = Net Project Cost

*Cost-share Payment = Net Project Cost * Cost-share Rate*

Cost-share payments may not exceed the maximum payment for the practice.

- iii. Commercial treatments: Such treatments generate income from the removal and sale of commercial forest products, which exceeds the costs of planning and implementation of the project. Practices which implement silvicultural prescriptions in such commercial treatments may be cost-shared, based on documented/eligible costs, unless specifically not authorized in practice specifications.

Project Practices - Technical Specifications.

This section provides guidance and technical specifications for eligible cost-share practices and practice components, summarized in the following table.

The purpose of the practice(s) is identified for each. In general, the purpose of the program is to support the establishment, management, maintenance, enhancement, and restoration of forests. Practice implementation must support the stated purpose(s) of the practice.

Technical Specifications are outlined for each practice/practice component. Costs eligible for reimbursement typically include professional services, essential materials, labor, and equipment rental.

Applicants (Landowners and Stewardship Foresters) should be sure to review Eligibility and General Program Requirements, as well as Procedures, found in this manual.

Minimum project size is 1 acre.

Technical Assistance for Project Planning/Monitoring

Purpose: The purpose of this practice is to support planning and field activities to implement recommendations of the Forest Management Plan successfully.

PRJ-1 Project Plan

This practice component is intended to support project-specific planning by a Stewardship Forester of cost-shared activities recommended in a Forest Management Plan.

Project Plans are required for all approved cost-shared projects (except as otherwise noted), and serve as project outlines for these practices. Project Plans are not authorized for cost-sharing independent of other eligible cost-shared practices.

Project Plans prepared by a Stewardship Forester provide information in sufficient detail to enable landowners, other resource professionals, and/or contractors to implement practices correctly. Project Plans also establish additional specifications by which the implemented practices may be evaluated.

In addition to the specifications below, Foresters are encouraged to include descriptions, diagrams, or images that may be useful for the landowner or contractor.

The following are required elements of a Project Plan:

1. Landowner name and current address: This must be the owner of record, consistent with town tax and county deed information for all parcels.
2. Plan Preparer Contact Information: Preparer's name, address, telephone and Maine Licensed Forester number. If prepared by an Intern Forester, both the Intern's and the Supervising Forester's contact information must be given.
3. Date: The date the Stewardship plan was prepared and the date the Project Plan was prepared.
4. Town and County where the project is to take place.
5. Property Information: Tax map or plan number and lot number
6. Project title: A brief descriptive title of the project
7. Cost-share project components: Use Maine Forest Service cost share code or codes if multiple practices are applied for.
8. Project description: This is a detailed description of the activity to take place, including:
 - a. Stands or distinct area where the activity is to take place.
 - b. Total area of the project (if practices are based on acreage).
 - c. Design and installation specifications for all aspects of the project, including as appropriate:
 - i. Planting specifications (species, type of planting stock, spacing, protective measures)
 - ii. Silvicultural treatments (prescriptions, stocking pre- and post-treatment, treatment specifications)
 - iii. Design of Best Management Practices to protect/enhance water quality, etc.
 - iv. Wildlife habitat improvement measures.
 - d. How the practice elements and the limits of the practice are marked on the ground.
 - e. Related project administrative/operational details including layout, marking, contractual and legal considerations as appropriate. The Project Plan must show that required permits for the project are in place.
 - f. Whether the proposed project is a pre-commercial treatment, a below-cost treatment, or part of a larger commercial treatment taking place on the owner's property. The MFS District Forester may request additional information to document services provided and utilization of forest products.
 - g. Any additional information required in the Technical Specifications of the individual practices.
9. Supporting information: This is a statement, based on the existing Forest Management Plan information and landowner objectives, that describes how the proposed project is:
 - a. Silviculturally justified or otherwise needed to produce intended results;

- b. Justified by landowner objective, based on expected outcomes/benefits;
 - c. Compatible with other landowner objectives;
 - d. Protective of other non-timber values (soil productivity, fish and wildlife habitat, water quality). Projects must avoid or minimize impacts to federally listed threatened or endangered species.
10. Project budget: This will consist of a table showing anticipated itemized costs for each segment of the practice from beginning to end. At a minimum, must include practice codes/names, anticipated extent/units, timeframe for completion, cost estimate per unit and total.
11. Required maps: Maps required with each project outline will include:
- a. A Location Map - showing the landowner's property in relation to known landmarks (e.g. drawn on a DeLorme Maine Atlas and Gazetteer).
 - b. An ownership map - showing the location of all practices approximately to scale and with sufficient detail to permit the locating of practices without the assistance of the landowner or consultant forester. Generally this will be based on the Forest Management Plan map. Project maps will include:
 - i. a north arrow, legend, scale bar, landowner name, project title, signature of the person preparing the map, and date prepared
 - ii. the latitude and longitude of the project area in degrees, minutes and seconds. Must approximate specific location(s) on the property where practices will take place, or a reference corner of a mapped, contiguous project area, will also be required. (If GPS is not available it is acceptable to determine the location using topographic maps or mapping software such as Terrain Navigator or equivalent.)
 - iii. other information pertinent to the project
12. All Project Plans will contain written instructions to the landowner or a vendor with sufficient detail so that the practice can be successfully completed. Project Plans must be submitted to the MFS District Forester.

Cost Share Rate: 50% of actual cost incurred by landowner payment not to exceed \$120.00 per project plan.

PRJ-2 Project Supervision, Layout and Monitoring

This practice is to permit adequate technical assistance from a Stewardship Forester to supervise, layout, or monitor cost-shared practices.

1. Services to be cost-shared under this practice must be described in the Project Plan. Cost-share is not authorized under this practice for projects that include other practices that provide sufficient technical assistance for successful project completion, as determined by the MFS District Forester.
2. All other applicable practice specifications must be met.
3. Services must be necessary to ensure successful implementation of the practice(s), monitor practice progress, and/or determine if practices have been completed in accordance with specifications and the Project Plan.

Project Supervision, Layout, and Monitoring is not authorized for commercial treatments.

Cost-share rate: 50% of actual costs incurred by the landowner, not to exceed \$20 per hour or 15% of total net project costs, whichever is less.

Afforestation and Reforestation

Purpose: The purpose of this practice is to establish a stand of forest trees for timber production. These practices apply in areas where trees are absent or poorly stocked, due to previous land uses, fire, insects, disease, or natural disasters, and where natural regeneration is to be supplemented or hastened.

The practice may be applied to all land suitable for growing trees. Sites must be protected from destructive grazing by livestock as needed. Suitable areas for afforestation/reforestation must be identified in the Project Plan. Planning includes a determination of the area to be afforested/reforested.

All projects will assure survival of planted stock. Applicants agree to replace mortality of planted stock in excess of 20%, unless they can demonstrate that mortality occurred due to factors beyond the applicant's control.

REF-1 Tree Planting

This practice component is intended to support the planting of trees on suitable sites. Eligible activities may include:

- purchase of containerized or bare root seedlings
- installation/planting of tree seedlings.

The following specifications apply:

1. Species selection must be appropriate to the site (soil, aspect, etc.) and the objectives of the practice. Native conifer species of an appropriate provenance will be used. Planting of native hardwood species may be approved at the discretion of the MFS District Forester.
2. Non-native species are limited to non-native larches, Norway spruce, and poplar. No other non-native species may be used.
3. Species selection should also account for present and expected insect and disease problems in the immediate area.
4. Planting stock must be either bare root or containerized stock. Planting stock must be of good quality, sufficient size, and properly handled, to help ensure survival.
5. Existing or expected competition from natural vegetation must be assessed in the Project Plan. If competition is too heavy for acceptable seedling survival, appropriate site preparation measures must be taken (see specifications for this practice component).
6. Soils throughout the treated area must be identified, based on County soils maps or other sources (e.g. Soil Suitability guides, or on-site evaluation by a Licensed Soil Scientist). Areas that are too wet, where ledge outcrops occur, or where soils are too shallow for tree survival should be marked off in the field with flagging and their acreage determined.
7. Conifers to be planted must be spaced at a 6 foot by 6 foot spacing for open area planting, except for red pine, at an 8 foot by 8 foot spacing, or larch, at a 10 foot by 10 foot spacing.
8. Approved planting of hardwoods should be in accordance with U.S. Forest Service silvicultural guides for hardwood types. Measures to prevent browsing of hardwoods must be identified in the Project Plan and implemented.
9. Installation of planted seedlings must be done to maximize survival, e.g. with proper vertical placement of roots and soil contact with the roots.
10. Spring planting is preferred. Fall planting must be authorized by the District Forester and occur only when/if adequate soil moisture is present.
11. Project Plans for Tree Planting must include recommendations for maintaining or supplementing competition control measures post planting.

Cost-share rate: 50% of actual cost incurred by the landowner for the practice not to exceed \$175 per acre.

REF-2 Interplanting/Enrichment Planting

This practice component is used supplement natural regeneration. Interplanting is authorized to improve stocking or composition by establishing seedlings of native tree species in existing forested areas.

1. All specifications of Tree Planting must be met.
2. Species selection must consider existing crown cover and shade tolerance. Native conifer species of an appropriate provenance will be used. Planting of native hardwood species may be approved at the discretion of the MFS District Forester.
3. No interplanting will be authorized in areas of more than 60% canopy cover, or in areas where harvesting is likely within 15 years.
4. A minimum of 30 trees per acre will be planted, at least 4 feet from natural regeneration, and without direct plant competition.
5. The Project Plan must include recommendations for future protection and release of planted trees.

Cost-share rate: 50% of actual cost incurred by the landowner for the practice not to exceed \$100 per acre

REF-3 Site preparation/competition control for planting

This practice component is intended to prepare a site prior to planting to favor establishment of planted trees, or to control competing vegetation at the time of or immediately after planting. The need for site preparation/competition control must be justified by the presence of competing vegetation of less desirable species, brush, dense litter, or other material which needs to be broken up and/or removed to expose the forest soil to permit establishment of trees from seed.

Eligible activities may include

- mechanical or chemical altering or modification of adverse potential seedling microsites; or
- measures taken to reduce vegetative stocking of undesirable species on a site, or
- measures taken to scarify the soil surface.
- use of mulch mats, weed barriers, tree shelters, or similar semi-permanent treatments to reduce competition

The following specifications also apply:

1. The project plan must include sufficient data to show that existing conditions will prevent the successful establishment of planted seedlings unless the recommended site preparation/competition control measures are taken. Plans must also identify the target vegetation and provide information to assure effectiveness of the practice.
2. Chemical site preparation requires the application of sufficient amounts, and no more, of herbicides to eliminate specific groups or strata from a plant community.
3. Herbicide application by either foliar application, basal spray or girdling and applying chemical to girdled area must conform to prescribed rates in the current "New England Guide to Chemical Weed and Brush Control of Problem Weeds and Brush on Non-Cropland", available from the Cooperative Extension.
4. Projects must also include Tree Planting, Interplanting/Enrichment Planting, or Interplanting/Enrichment Planting for Wildlife..

Cost-share rate: 50% of actual cost incurred by the landowner for the practice, not to exceed \$150 per acre

Forest Stand Improvement

Purpose: The purpose of this practice is to apply silvicultural principles and techniques to enhance growth and quality of trees and forest products, through measures that control stand density, stocking, species composition, and/or available growing space, or that select for or enhance stem quality.

All components planned as part of a single project must be addressed in a Project Plan or Harvest Plan that meets the guidelines in this manual. All practices must be in accordance with the approved Plan.

FSI-1 Pre-commercial thinning of sapling stands

This practice is intended to improve growth, quality and composition of sapling stands. Cost-share is authorized for the spacing/thinning of stands by mechanical (non-chemical) means.

1. The practice will take place in sapling stands;
 - a. composed of 75% or greater by softwood/conifer species; or
 - b. of other species composition at the discretion of the MFS District Forester.
2. Selection of species to favor should be justified based on stand type, stand structure, and silvicultural guidelines, as well on the form, vigor, and canopy position of individual saplings. Where possible 2 or more species should be retained.
3. Spruce/fir stands should generally favor retention of spruce over fir. Project Plans should justify the retention of fir over spruce if proposed.
4. Stands will be composed of saplings, and trees to be spaced will include saplings 1-5 inches dbh.
5. Trees will be spaced to approximately 6 foot to 8 foot spacing unless otherwise approved by the District Forester. Spacing in plantations will be approved at the discretion of the District Forester.
6. Trees to be removed will be completely severed at ground level (or below the base of the lowest live branches).
7. Spacing of trees will minimize potential negative impacts to form, such as from white pine weevil, snow/ice damage, or excessive branchiness.
8. Spacing will occur primarily through the use of chain saws, brush saws, or loppers, or similar hand-operated equipment.
9. If spacing is proposed via boom-mounted sawheads on tracked or wheeled equipment, or similar machinery, the practice must be approved in advance by the MFS District Forester. In such cases occasional corridors for vehicle access which are wider than the proposed spacing may be permissible.

NOTE: Applications for this practice that fall into identified Canada lynx habitat regions (Aroostook County, northern portions of Penobscot, Piscataquis, Somerset, Franklin, and Oxford counties) will require MFS District Forester approval. In addition, review by the US Fish and Wildlife Service may be necessary and may affect approval of the practice.

Activities to accomplish Forest Health or Wildlife Habitat Improvement objectives should apply under the appropriate practice(s).

Cost-share rates: 50% of actual costs incurred by the landowner, not to exceed \$150 per acre.

FSI-2 Marking for crop tree release

This practice permits the cost-sharing of the services of a Stewardship Forester to designate, with paint, crop trees to be released as part of Crop Tree Release.

1. Selection of crop trees will be consistent with technical specifications for crop tree release and silvicultural principles.
2. All trees to be removed must be marked with paint.
3. All crop trees to be released must be marked on the stem at approximately eye-level with a "C" in durable paint, or an encircling band of white or blue long-lasting paint.
4. A tally showing crop tree count by species shall be submitted with the claim for payment.

Marking for crop tree release is authorized for pre-commercial and below-cost commercial treatments.
Marking for crop tree release is not authorized for commercial treatments.

Cost-share rates are 50% of actual cost incurred by the landowner, not to exceed \$1 per crop tree or \$30 per acre.

FSI-3 Crop tree release

This practice is intended to improve growth, composition and quality of sapling and poletimber stands by increasing the growing space of desirable trees.

The following specifications apply:

1. This practice is to be used in mixedwood, hardwood, and white pine stands, on sites with at least moderate timber production potential.
2. Crop trees will be of a species, form, and vigor that indicate future potential as sawtimber. Damaged or diseased trees will not be selected.
3. Crop trees will be 3-11 inches dbh, and at least 25 feet tall, with a live crown ratio >30%.
4. Crop trees will be released on 3-4 sides of the crown by removal of competing trees. Removal may occur through felling, complete double girdling, or similar treatment.
5. Removal may occur through application of herbicides if approved by the MFS District Forester. If herbicides are used, care must be taken to avoid unintended backflash. (Backflash involves the movement of herbicides through root grafts in some species.) The type, method, and rate of chemical use must be outlined in the Project Plan.
6. At least 20 crop trees per acre will be released. The maximum number of crop trees is as follows:
 - a. 80 trees per acre in hardwood stands
 - b. 120 trees per acre in mixedwood stands
 - c. 150 trees per acre in white pine or softwood stands.
7. In addition, overall stocking of the stand will be maintained so that a well-distributed, well-stocked stand remains.
 - a. For stands averaging more than 5 inches dbh, a minimum of 100-400 poletimber trees per acre will be retained per acre.
 - b. For stands averaging less than 5 inches dbh, a minimum of 400-600 saplings/poletimber trees per acre will be retained.
8. The risk of sunscald, epicormic branching, windthrow, and other damaging agents will be minimized by proper tree selection and maintenance of adequate stand stocking.
9. Crop trees will be marked as outlined in the practice, Crop tree marking.

Crop tree release is authorized for pre-commercial and below-cost commercial treatments.
Crop tree release is not authorized for commercial treatments.

Activities to accomplish Forest Health or Wildlife Habitat Improvement objectives should apply under the appropriate practice(s).

Cost-share rate: 50% of actual costs incurred, not to exceed \$2 per crop tree released or \$100/acre.

FSI-4 Marking for pruning

This component permits the cost-sharing of the services of a Stewardship Forester to designate, with paint, trees to be pruned as part of FSI-5.

1. Selection of trees to be pruned will be consistent with technical specifications for pruning and silvicultural principles.
2. All trees to be pruned must be marked on the stem at approximately eye-level with white or blue long-lasting paint. Trees to be pruned shall be marked using a system of horizontal or diagonal slashes or bars to indicate the maximum height to which the tree is to be pruned:
 - a. 1 bar for 17 feet
 - b. 2 bars for 13 feet
 - c. 3 bars for 9 feet
 - d. 4 bars for 25 feet (white pine only).
3. A tally of trees to be pruned, by species and height of pruning, as outlined below, shall be submitted with the claim for payment.

Cost-share rates are 50% of actual cost incurred by the landowner for the practice, not to exceed \$1 per tree or \$30 per acre.

FSI-5 Pruning

This practice is for the removal of selected branches from lower stems to improve the quality of future wood products, in areas where the quality of the final product can be improved and the site quality is high enough to economically produce lumber quality trees.

1. Pruned trees will be of a species, form, and vigor that indicate future potential as sawtimber. Damaged or diseased trees, trees with excessive branches >2 inches dbh, multiple crooks, sweep, or other stem or crown defects that cannot be remedied, will not be selected.
2. Pruning of balsam fir is not authorized for cost-share. Pruning of hardwoods will be approved only at the discretion of the MFS District Forester.
3. Pruned trees will be selected with the intent of retaining pruned trees until maturity.
4. Pruned trees will be 3-11 inches dbh, and at least 25 feet tall, with a live crown ratio >30%.
5. Pruned trees will have been released on 3-4 sides of the crown by removal of competing trees, prior to pruning, within the last 5 years, and be free to grow.
6. At least 20 trees per acre will be pruned. Only marked trees will be pruned. The maximum number of pruned trees is as follows:
 - a. 80 trees per acre in hardwood stands
 - b. 100 trees per acre in mixedwood stands
 - c. 120 trees per acre in white pine or othersoftwood stands.
7. Pruning must be done with a saw. Use of chainsaws on a pole is discouraged.
8. Pruning must leave trees with a live crown ratio >30%. Pruning shall apply only to that portion of the trunk in need of pruning.

Cost share rates are 50% of actual cost, not to exceed the following:

FSI-5.1 Pruning 0-9'	\$0.50
FSI-5.2 Pruning 0-13'	\$1.00
FSI-5.3 Pruning 0-17'	\$1.75
FSI-5.4 Pruning 9-13'	\$0.50
FSI-5.5 Pruning 13-17'	\$0.75
FSI-5.6 Pruning 9-17'	\$1.25
FSI-5.7 Pruning 0-25'	\$2.50 (MFS District Forester discretion)
FSI-5.8 Pruning 17-25'	\$1.25 (MFS District Forester discretion)

Water Quality Improvement & Watershed Protection

Purpose: The purpose of these practices is to maintain or improve water quality on forest land; maintain soil productivity and control erosion on forest land; prevent pollution during forestry activities; protect water quality, riparian areas, and forest wetlands and watersheds; and protect streambank and stream channel integrity.

All components planned as part of a single project must be addressed in a Project Plan or Harvest Plan that meets the guidelines in this manual. All practices must be in accordance with the approved Plan, and must be maintained for the duration of the Forest Management Plan.

Applicants are responsible for obtaining and complying with all applicable permits, laws, and standards that may apply. Cost-share is not authorized for practices which are unrelated to protection of water resources that occur on or near the property. Cost-share is not authorized for activities primarily related to agricultural production.

Cost-share is not authorized for

1. Road or trail construction, except for eligible components directly related to water quality.
2. Regular/routine maintenance of roads or trails.
3. Excavation in forested wetlands except as directly related to eligible components.
4. Practices that result in the degradation of water quality, stream channel integrity, riparian forest condition, or impairment of wetland function(s).

NOTE: Applications for these practices which fall into any one of 8 federally listed endangered Atlantic salmon watersheds will require MFS District Forester approval. In addition, review by the US Fish and Wildlife Service may be necessary and may affect approval of the practice.

WTR-1 Forest land erosion control system design/layout

This component is intended to permit landowners to employ Stewardship Foresters to design and lay out comprehensive forest land erosion control systems, to design access systems needed for forest management purposes that protect water quality, and to supervise installation of needed erosion control devices before erosion takes place. This practice occurs concurrently with the Project Plan, which also serves as the report/specifications of the practice.

The practice includes identifying the need for water control structures, designing needed structures, including the most cost-effective structures available, laying out locations of structures on the ground, and supervising installation of structures relating to erosion control and/or water quality protection. Planning for avoidance and minimization is eligible if clearly described in the project plan.

1. Design and layout should emphasize the placement of road systems and skid trails to minimize the need for the construction of additional structures, water crossings, and soil stabilization.
2. All design work will take place prior to the commencement of other related management activities.
3. The placement of structures will be flagged on the ground.
4. The Stewardship Forester will be on site at the time of installation to ensure that all structures are installed properly in the correct location.
5. The installation of all water crossings will employ a 75-foot no-grub zone in which excavation is minimized, on both approaches to the crossing.
6. All water crossings will be designed to divert/disperse water traveling on the road/trail surface before it reaches the crossing.
7. All designs for permanent water crossings will be sized to accommodate a 50-year storm event. Project Plans will include the method used and all necessary sizing calculations and considerations.
8. All designs for permanent water crossings will meet the need for fish and aquatic passage. At a minimum, no crossing structure will provide an opening which is less than the actual channel width (at normal high water).

Cost share rate:

WTR-1: 50% of actual cost incurred by the landowner, not to exceed \$400,

WTR-1d: 75% of actual cost incurred by the landowner, not exceed \$600 in designated watersheds
(designated watersheds: Eastern Coastal Rivers, Central Coastal Rivers, and towns in Maine's Coastal Zone)

WTR-2 Mitigation of Pre-existing Erosion Problems

This practice allows the repair of existing erosion problems that pose a sedimentation threat to surface water bodies, resulting from past practices and/or beyond the control of the current landowner, including maintenance, repair, or replacement of failed erosion control structures or substandard water crossings, and measures needed to stabilize or restore actively eroding sites.

- purchase and placement of materials for temporary soil stabilization of disturbed soil. Eligible materials include brush from on-site, hay or straw mulch, and seeds of grasses and forbs.
- purchase and proper placement of materials for permanent soil stabilization of disturbed soil. Eligible materials include permanent erosion control blankets, riprap or cobbles, and use of geotextile. Surfacing material (i.e. gravel) is only eligible if needed to stabilize soil and/or direct water off the road surface.
- excavation or shaping of the soil surface is eligible to the extent needed to control water flow
- installation of water flow control structures on roads and trails in areas near surface water. Eligible structures include wing ditches/turnouts, ditch sections <100' long, broad-based dips, cross-drainage culverts, water bars, or similar structures, appropriately installed and spaced. All water flow control structures will be designed to ensure that water exiting the structure at the outfall is dispersed to areas of intact forest floor for infiltration. Structures must be permanent.
- other measures to remediate erosion problems as approved by the MFS District Forester.

Cost-share is not authorized to apply Best Management Practices in areas without existing erosion problems, for mitigation necessitated by the failure of the current landowner to use Best Management Practices, or to correct problems identified in a notice of violation or settlement agreement.

1. Landowners must also apply for and successfully implement the practice, Forest land erosion control system design/layout.
2. Installation/mitigation practices will follow the recommendations of the Project Plan, at the specific locations identified in the design/layout.
3. All new water control devices must be appropriate to the site and designed/constructed properly. Maine Best Management Practice recommendations will be considered, and any deviation from recommended practices will be justified.
4. Landowners must make a good faith effort to prevent failure due to unauthorized land uses such as off-road vehicles. Planning/selection of structures should consider measures that will maintain the integrity of structures or other design elements.
5. Replacement of previously cost-shared structures will not be authorized unless it can be demonstrated to the satisfaction of the MFS District Forester that the failure was beyond the landowner's control. Installation of replacement structures will take into account the reasons for failure and mitigate for them.
6. Project Plans will include written instructions to landowners outlining required maintenance of installed structures/practices. By applying for this practice, landowners are agreeing to perform the necessary maintenance for the life of the project (10-year minimum).

Cost-share rate:

WTR-2: 50% of actual costs incurred by the landowner, not to exceed \$1000

WTR-2d: 75% of actual cost incurred by the landowner, not exceed \$1500 in designated watersheds
(designated watersheds: Eastern Coastal Rivers, Central Coastal Rivers, and towns in Maine's Coastal Zone)

WTR-3 Stream crossing structure installation/stabilization

This component is intended to aid in the proper selection, placement, stabilization, and closeout of stream crossing structures. Eligible costs include the placement and closeout of temporary bridges, including stabilization of streambanks; and placement and stabilization of permanent culverts, pipe arches, or bridges, including geotextile or riprap on approaches/abutments.

1. Landowners must also apply for and successfully implement the practice, Forest land erosion control system design/layout. Design specifications will exceed minimum regulatory requirements for stream crossings.
2. Stream crossings necessary for temporary or permanent access for forest management are eligible. Crossings that primarily facilitate other land uses are not eligible.
3. Stream crossing structure practices will follow the recommendations of the Project Plan, at the specific locations identified in the design/layout. The Stewardship Forester will be on site for installation to ensure that the design specifications are met. (Supervision is eligible for cost-share under WTR-1).
4. Replacement of previously cost-shared structures will not be authorized unless it can be demonstrated to the satisfaction of the MFS District Forester that the failure was beyond the landowner's control. Installation of replacement structures will take into account the reasons for failure and mitigate for them.

Cost-share rate:

WTR-3: 50% of actual costs incurred by the landowner, not to exceed \$500

WTR-3d: 75% of actual cost incurred by the landowner, not exceed \$1500 in designated watersheds
(designated watersheds: Eastern Coastal Rivers, Central Coastal Rivers, and towns in Maine's Coastal Zone)

WTR-4 Riparian forest buffer planting

This component permits the establishment, through planting, of riparian forests adjacent to streams, lakes, ponds, or nonforested wetlands. The component applies in areas previously devoted to other land uses, or of forested areas severely degraded by natural or artificial causes beyond the control of the landowner.

Purchase and installation of tree and shrub seedlings, appropriate to the site, and. Mixtures of tree species are preferred. Established riparian forest buffers must be no less than 75' wide; areas of established buffers greater than 200 feet from the water body are not eligible. Sites must be reasonably protected from destructive grazing. Fencing or related measures to exclude livestock are not eligible costs.

The following specifications apply:

1. Species selection must be appropriate to the site (soil, aspect, etc.) and the objectives of the practice. Native species of an appropriate provenance will be used.
2. Species selection should also account for present and expected insect and disease problems in the immediate area. At least 3 species will be planted in mixture.
3. No non-native species may be used.
4. Planting stock must be either bare root, containerized, potted or ball-and-burlap stock, less than a 1 inch caliper, or live cuttings of appropriate species. All stock must be of good quality and properly handled to help ensure survival.
5. Existing or expected competition from natural vegetation must be assessed in the Project Plan. If competition is from well-established, natural vegetation appropriate to the site, this practice may not be authorized. If competition from non-woody, non-native, or off-site species is determined to be too heavy for acceptable seedling survival, the use of mulch mats, weed barriers, and tree shelters, will be eligible.
6. Soils throughout the treated area must be identified, based on County soils maps, Soil Suitability guides, or on-site evaluation by a Licensed Soil Scientist. Areas that are too wet, where ledge outcrops occur, or where soils are too shallow for tree survival should be marked off in the field and their acreage determined.
7. Spacing shall be between 4 and 8 feet, and sufficient to meet soil stabilization and water quality protection goals.
8. Measures to prevent browsing of hardwoods must be identified in the Project Plan and implemented.
9. Installation of planted seedlings must be done to maximize survival, e.g. with proper vertical placement of roots and soil contact with the roots.
10. The riparian buffer established must be a minimum of 75 feet wide, but no more than 200 feet wide. Planting to widen an existing buffer to 200 feet may be authorized by the MFS District Forester.
11. Spring planting is preferred. Fall planting must be authorized by the District Forester and occur only when/if adequate soil moisture is present.
12. Project Plans for this practice must include recommendations for maintaining or supplementing competition control measures post planting.
13. Additional measures to stabilize and protect shorelines may be authorized by the MFS District Forester. Where appropriate, additional resource professionals and/or other agency staff shall be consulted.

Cost-share rate:

WTR-4: 50% of actual costs incurred by the landowner, not to exceed \$200 per acre

WTR-4d: 75% of actual cost incurred by the landowner, not exceed \$300 per acre in designated watersheds (designated watersheds: Eastern Coastal Rivers, Central Coastal Rivers, and towns in Maine's Coastal Zone)

Wildlife Habitat Improvement

Purpose: The purpose of this practice is to establish, maintain, and restore forested wildlife habitat(s). The practices include measures to influence a range of limiting factors to the quantity and quality of available habitat, primarily through silvicultural means.

All components planned as part of a single project must be addressed in a Project Plan or Harvest Plan that meets the guidelines in this manual. All practices must be in accordance with the approved Plan, and must be maintained for the duration of the Forest Management Plan.

WLD-1 Pre-commercial thinning of sapling stands for wildlife cover

This practice is intended to manage the density, vigor, and composition of sapling stands to promote wildlife habitat, especially deer wintering habitat. Cost-share is authorized for the spacing/thinning of stands by mechanical (non-chemical) means.

1. This practice is primarily intended for the northern two-thirds of the state, and will be approved for southern counties only at the discretion of the District Forester.
2. The practice will take place in sapling stands composed of;
 - a. 75% or greater by softwood/conifer species; or
 - b. other species composition at the discretion of the MFS District Forester.
3. Selection of species to favor should be justified based on stand type, stand structure, and silvicultural guidelines, as well on the form, vigor, and canopy position of individual saplings. The emphasis in this practice is on retaining diverse softwood cover. Wherever possible all or most species present should be represented in the residual stand.
4. Spruce/fir stands should generally favor retention of spruce over fir. Project Plans should justify the retention of fir over spruce if proposed.
5. Areas to be thinned will be stands composed of more than 2800 saplings per acre, and trees to be spaced will include saplings 0.5-5 inches dbh. Trees will be spaced to approximately 4 feet to 6 feet. Planning for variable densities with patches retaining a 2-4 foot spacing to provide snowshoe hare cover may be approved by the District Forester.
6. Trees to be removed will be completely severed below the base of the lowest live branches.
7. Spacing of trees will consider potential negative impacts to habitat.
8. Spacing will occur primarily through the use of chain saws, brush saws, or loppers, or similar hand-operated equipment.
9. Scattered remnant poletimber may be retained to provide structural diversity.
10. The project plan will describe how future management of the project area will maintain wildlife cover.

NOTE: Applications for this practice that fall into identified Canada lynx habitat regions (Aroostook County, northern portions of Penobscot, Piscataquis, Somerset, Franklin, and Oxford counties) will require MFS District Forester approval. In addition, review by the US Fish and Wildlife Service may be necessary and may affect approval of the practice.

Activities to accomplish Forest Stand Improvement or Forest Health objectives should apply under the appropriate practice(s).

Cost-share rates: 50% of actual costs incurred by the landowner, not to exceed \$150 per acre.

WLD-2 Identification and marking for retention of nest or den trees

This practice is to permit cost-share the services of a Stewardship Forester for marking of existing and potential den or nest trees in forest stands.

1. All trees to be retained will be marked by a “W” in durable paint, visible from all sides.
2. All actively-used den and nest trees will be retained.
3. A minimum of 4 potential/replacement den or nest trees (may include trees with broken tops or large broken-off branches), 10 inches dbh or larger, will be designated per acre.
4. A tally of den or nest trees marked, by species, shall be submitted with the claim for payment.
5. Bald eagle nests or nesting areas should not be marked between February 1st and August 31st.

Cost-share rates are 50% of actual cost incurred by the landowner for the practice, not to exceed \$1 per tree or \$20 per acre.

WLD-3 Marking for release of hard and soft mast trees

This practice permits the cost-sharing of the services of a Stewardship Forester to designate, with paint, hard and soft mast trees to be released as part of Mast tree release.

1. Species to be released in this practice include smooth-barked beech, oak, white or yellow birch, wild apple, wild crabapple, mountain ash, serviceberry/shadbush, cherry, ash, chestnut, and butternut. Other species may be included at the discretion of the MFS District Forester.
2. All mast trees retained must be 3 inches dbh or larger, as well as full-crowned and vigorous, or clearly capable of becoming so through release from competition. Clearly diseased trees (especially diseased beech) may be included only if fully crowned and showing evidence of good nut production.
3. All trees to be removed must be marked with paint.
4. All mast trees to be released must be marked with an "M" in durable paint, visible from all sides.
5. A tally showing mast tree count by species shall be submitted with the claim for payment.

Marking for release of hard and soft mast trees is authorized for pre-commercial and below-cost commercial treatments.

Marking for release of hard and soft mast trees is not authorized for commercial treatments.

Cost-share rates are 50% of actual cost incurred by the landowner for the practice, not to exceed \$1.50 per mast tree or \$45 per acre.

WLD-4 Mast tree release

This practice is intended to improve habitat quality by increasing the growing space and vigor of selected mast trees.

1. This practice is to be used in conjunction with the practice, "Marking for release of hard and soft mast trees". Selection of trees will conform to the specifications of that practice.
2. Selected mast trees will be released on 3-4 sides of the crown by removal of competing trees with crowns within 5 feet of the mast tree's crown. Removal may occur through felling, complete double girdling, or similar methods.
3. Removal may occur through application of herbicides, at the discretion of the MFS District Forester. If herbicides are used, care must be taken to avoid unintended backflash. (Backflash involves the movement of herbicides through root grafts in some species.) The type, method, and rate of chemical use must be outlined in the Project Plan.
4. In addition, overall stocking of the stand will be maintained so that a well-distributed, well-stocked stand remains.
5. The risk of sunscald, epicormic branching, windthrow, and other damaging agents will be minimized by proper tree selection and maintenance of adequate stand stocking.
6. Crop trees will be marked as outlined in the practice, Crop tree marking.

Mast tree release is authorized for pre-commercial and below-cost commercial treatments.

Mast tree release is not authorized for commercial treatments.

Activities to accomplish Forest Health or Wildlife Habitat Improvement objectives should apply under the appropriate practice(s).

Cost-share rate: 50% of actual costs incurred, not to exceed \$2 per mast tree released or \$100/acre.

WLD-5 Interplanting/enrichment planting for wildlife

This practice component is used supplement natural regeneration through the planting of additional tree/shrub species that provide wildlife benefits. Eligible activities may include:

- purchase of appropriate planting stock of eligible species*
 - installation/planting of trees/shrubs.
1. Species selection* must be appropriate to the site (soil, aspect, etc.). Native species of an appropriate provenance will be used. Species selection should also account for present and expected insect and disease problems in the immediate area.
 2. Planting stock must be of good quality and properly handled to help ensure survival.
 3. Existing or expected competition from natural vegetation must be assessed in the Project Plan. If competition is determined to be too heavy for acceptable seedling survival, appropriate site preparation measures must be taken (see specifications for this practice component).
 4. Soils throughout the treated area must be identified, based on County soils maps, Soil Suitability guides, or on-site evaluation by a Licensed Soil Scientist. Areas that are too wet, where ledge outcrops occur, or where soils are too shallow for tree survival should be marked off in the field and their acreage determined.
 5. Measures to prevent browsing of trees/shrubs must be identified in the Project Plan and implemented.
 6. Installation of planted seedlings must be done to maximize survival, e.g. with proper vertical placement of roots and soil contact with the roots.
 7. Spring planting is preferred. Fall planting must be authorized by the District Forester and occur only when/if adequate soil moisture is present.
 8. Project Plans for Tree Planting must include recommendations for maintaining or supplementing competition control measures post planting.
 9. No interplanting will be authorized in areas of more than 70% canopy cover, or in areas where harvesting is likely within 15 years.
 10. A minimum of 10 trees/shrubs per acre will be planted, at least 4 feet from natural regeneration, and without direct plant competition.

Cost-share rate: 50% of actual cost incurred by the landowner for the practice not to exceed \$100 per acre.

*Eligible species include:

Downy serviceberry (*Amelanchier arborea*)
 Shadblow serviceberry (*A. canadensis*)
 Allegheny serviceberry (*A. laevis*)
 Black chokeberry (*Aronia melanocarpa*)
 Buttonbush (*Cephalanthus occidentalis*)
 Gray dogwood (*Cornus racemosa*)
 Red-osier dogwood (*C. sericea*)
 American filbert (*Corylus americana*)
 Beaked hazelnut (*C. cornuta*)
 Winterberry (*Ilex verticillata*)
 Common juniper (*Juniperus virginiana*)
 Northern bayberry (*Myrica pensylvanica*)
 Chokecherry (*Prunus virginiana*)
 Wild plum (*P. americana*)
 Highbush blueberry (*Vaccinium corymbosum*)
 Nannyberry (*Viburnum lentago*)
 Highbush cranberry (*V. opulus* var. *trilobum*)
 American elderberry (*Sambucus canadensis*)
 Scarlet elder (*S. pubens*)
 American mountain ash (*Sorbus americana*)
 Crabapple (*Malus* spp.)
 Hawthorn (*Crataegus* spp.)

WLD-6 Field identification and designation of riparian forest habitat

This practice is for the services of a Stewardship Forester to identify and designate permanently riparian forests that provide or protect important wildlife habitat, and to facilitate future management of these areas for wildlife benefit.

1. The practice is only available to landowners whose property includes or is adjacent to streams, rivers, lakes, coastal waters, or nonforested wetlands.
2. The practice must facilitate the implementation of other non-commercial or commercial management activities recommended in the Forest Management Plan.
3. All riparian area boundaries are to be clearly marked in long-lasting paint. Riparian areas must include all portions of the waterbody on the property.
4. Bald eagle nests or nesting areas should not be marked between February 1st and August 31st.
5. The following minimum widths shall be used:
 - a. intermittent/first order streams – 75 feet
 - b. second and third order streams, and ponds or wetlands 1-10 acres – 150 feet
 - c. third order and larger streams – 330 feet
 - d. lakes/ponds, or wetlands >10 acres, coastal areas – 660 feet
6. Riparian area widths will be measured from the normal high water mark, or the edge of the non-forested wetland. Braided or multiple channels will be treated as a single channel, with riparian width measured from the normal high water mark of the outermost channel on each side.
7. Areas containing rare, threatened, or endangered animals, plants, or natural communities identified by Maine Natural Areas Program and/or the Department of Inland Fisheries and Wildlife will be managed to protect those features.
8. Practice maintenance will be based on subsequent management to protect the identified features/riparian values. All management activities in designated riparian areas for the life of the practice will:
 - a. promote riparian wildlife habitat features
 - b. protect vernal pool wildlife habitat
 - c. be based on silvicultural prescriptions developed and implemented by a Licensed Forester
 - d. promote or maintain multi-aged forest with a more or less continuous canopy
 - e. maintain or create den or nest trees, snags, and coarse woody debris.
 - f. prevent ground disturbance within 75 feet of the normal high water mark.
 - g. mark any trees to be removed.
 - h. exceed regulatory requirements for protection of water bodies.
9. Project Plans must include the type of water body, any known or identified habitats, the width to be used, and the number of acres in the riparian area, as well as a description of the expected future management of the area.

Cost-share rate: 50% of the cost, not to exceed \$50 per acre of riparian habitat.

WLD-7 Field identification and designation of upland forest habitat

This practice is for the services of a Stewardship Forester to designate, in the field, special upland wildlife habitat features and plan for their continued management.

1. The practice must facilitate the implementation of other non-commercial or commercial management activities recommended in the Forest Management Plan.
2. The minimum total habitat areas identified under this practice will be 10% of the parcel area, or 5 acres, whichever is less. The maximum practice area will be 50% of the parcel area, or 15 acres, whichever is less.
3. Individual habitat features will be at least 1/5 acre (r=52.6'). Generally, long narrow features are not acceptable.
4. Habitat features under this practice will be identified in the field by long-lasting paint or other method approved by the MFS District Forester. Areas will be laid out in a manner that will insure adequate protection of identified habitat.
5. Upland habitat features may include
 - a. Clusters of snags, den/nest trees, mast trees, or large/overmature trees that provide valuable wildlife habitat
 - b. Softwood inclusions in hardwood stands; hardwood inclusions in softwood stands
 - c. Unique or unusual stand types
 - d. Vernal pools or clusters of vernal pools
 - e. Areas containing rare, threatened, or endangered animals, plants, or natural communities identified by Maine Natural Areas Program and/or the Department of Inland Fisheries and Wildlife
6. Practice maintenance will be based on subsequent management to protect the identified features/habitat values. All management activities in designated upland habitat areas for the life of the practice will:
 - a. promote existing wildlife habitat features
 - b. incorporate recommendations/guidelines of the Maine Natural Areas Program and/or the Department of Inland Fisheries and Wildlife to protect rare, threatened, or endangered animals, plants, or natural communities
 - c. be based on silvicultural prescriptions developed and implemented by a Licensed Forester
 - d. promote or maintain multi-aged forest with a more or less continuous canopy
 - e. maintain or create den or nest trees, snags, and coarse woody debris.
 - f. prevent undue ground disturbance and impacts to soils and localized water resources (springs, seeps, etc.).
 - g. mark any trees to be removed.
 - h. exceed regulatory requirements for protection of wildlife habitat or other regulated features.
7. Project Plans will include information on the type of upland habitat feature, any other known or identified habitats, the area to be included, as well as a description of the expected future management of the area.

Cost-share rate: 50% of actual cost incurred by the landowner, not to exceed \$40 per acre.

Forest Health

Purpose: The purpose of this practice is to protect, improve, or restore forest health through the detection and control of identified insects and disease conditions in established stands. The practice also is intended as a means of slowing or preventing the spread of identified outbreaks.

Eligible activities include cutting and removal of infected and declining trees, as well as reduction of host species of identified conditions/agents.

Identified conditions: Forest Health practices should be targeted at reducing stand susceptibility (likelihood of the stand being attacked) or vulnerability (likelihood of mortality of individual trees) associated with one or more of the following situations:

1. Spruce-fir stands affected by one or more agents including balsam woolly adelgid, spruce bark beetle, dwarf mistletoe, and/or coastal spruce decline
2. Hemlock in softwood or mixedwood stands, susceptible/vulnerable to hemlock wooly adelgid
3. White pine stands in decline or affected by blister rust, drought, and/or other agents specific to white pine
4. Stands in which American beech is a significant component (>20% of basal area), and/or trees resistant to beech bark disease are present.
5. Other stands, at the discretion of the MFS District Forester, with a significant occurrence of insect-infested, cankered, or otherwise diseased stems that could restrict the vigor of the stand or pose a hazard to remaining trees.

Stewardship Foresters implementing these practices should ensure their own familiarity with signs, symptoms, and recommended treatment methods for these conditions.

FH-1 Field Assessment of Current Forest Health Conditions

This practice provides for a field examination of forest health conditions by a Stewardship Forester. This practice takes place concurrently with the Project Plan, which also serves as the report of the Field assessment.

1. This practice is authorized for all identified conditions.
2. The practice will be approved where, in the opinion of the MFS District Forester, there is a reasonable likelihood of a significant change in identified forest health conditions since the Forest Management Plan was prepared.
3. The results of the assessment and recommendations for necessary treatments such as sanitation must be incorporated into the Project Plan.
4. The Plan must also identify where and if recommended treatments also necessitate application for permits or variances from local, state or federal regulations.

Cost share rate:

FH-1 50% of actual costs incurred by the landowner, not to exceed \$1.00 per acre

FH-1d 75% of actual costs incurred by the landowner, not to exceed \$1.50 per acre
(designated forest health area: Washington, Hancock, Waldo, and Knox counties)

FH-2 Marking for Sanitation of Infected/Declining Stands

This practice permits the cost-sharing of the services of a Stewardship Forester to designate, with paint, trees to be cut and/or removed as part of Sanitation. The MFS District Forester may determine that trees to be cut may be designated by prescription, in which case this practice will not be approved.

1. This practice is authorized for all identified conditions.
2. Selection of trees to be removed will be consistent with technical specifications for sanitation and silvicultural principles.
3. Trees to be removed must be marked with paint.
4. Any crop trees to be released must be marked with a "C" in durable paint.
5. The percentage of basal area removed must be documented to the satisfaction of the MFS District Forester (e.g. by including inventory data by species, a tally of trees removed, or other information), and submitted with the claim for payment.

Marking for sanitation of infected/declining stands is authorized for pre-commercial and below-cost commercial treatments.

Marking for sanitation of infected/declining stands is not authorized for commercial treatments.

Cost-share rates are 50% of actual cost incurred by the landowner for the practice, not to exceed

FH-2L	\$10 per acre for Light* Sanitation
FH-2M	\$20 per acre for Medium* Sanitation
FH-2H	\$30 per acre for Heavy* Sanitation.

**see Sanitation practice specifications for definitions*

FH-2Ld*	\$15 per acre for Light Sanitation
FH-2Md	\$30 per acre for Medium Sanitation
FH-2Hd	\$45 per acre for Heavy Sanitation.

*designated forest health area: Washington, Hancock, Waldo, and Knox counties)

FH-3 Sanitation Cutting in Infected/Declining Stands

This practice allows the cutting of infected or declining trees to prevent further infection and improve growth and composition of the residual stand. It may also be used to reduce or eliminate host tree species where infection is likely in the near future. Removal of infected material is authorized as determined by the MFS District Forester to meet the purposes of cost-sharing.

1. This practice must be based on a current field assessment by a Stewardship Forester.
2. This practice is authorized for all identified conditions.
3. Trees to be cut/removed will be those that exhibit signs or symptoms of disease, reduced vigor, or are of host species of identified agents that are present in the general vicinity.
4. Trees to be cut/removed will be marked with paint, unless the MFS District Forester approves an alternative designation by prescription, by species, or similar written guidelines.
5. Cutting/removal rates will be commensurate with the need for sanitation and silvicultural principles. Overall stocking of the stand will be maintained at a level which, as much as possible, uses the site's productive potential. The expected composition, stocking, growth and quality of the future or residual stand, and its susceptibility to further insect/disease will be described in the Project Plan. If applicable, regeneration needs will be addressed.
6. Rates of cutting/removal of infected/declining/host species trees will fall into one of 3 categories:
 - a. Light (0-20 square feet of basal area removed)
 - b. Medium (21-40 square feet of basal area removed)
 - c. Heavy (>40 square feet of basal area removed)
7. Cutting/removal may occur through felling, complete double girdling, or similar methods.
8. Cutting/removal may occur through application of herbicides, at the discretion of the MFS District Forester. If herbicides are used, care must be taken to avoid unintended backflash. (Backflash involves the movement of herbicides through root grafts in some species.)
9. Additional removal/thinning of trees that occurs concurrently with the sanitation will be according to a silvicultural prescription, and will not be included in the basal area used to determine cost-share.
10. The use of pesticides is not authorized.

Sanitation cutting of infected/declining stands is authorized for pre-commercial and below-cost commercial treatments.

Sanitation cutting of infected/declining stands is not authorized for commercial treatments.

Cost-share rates are 50% of actual cost incurred by the landowner for the practice, not to exceed

FH-3L	\$50 per acre for Light Sanitation
FH-3M	\$60 per acre for Medium Sanitation
FH-3H	\$70 per acre for Heavy Sanitation.

FH-3Ld*	\$75 per acre for Light Sanitation
FH-3Md	\$90 per acre for Medium Sanitation
FH-3Hd	\$105 per acre for Heavy Sanitation.

*designated forest health area: Washington, Hancock, Waldo, and Knox counties)

Invasive Species

Purpose: These practices are to eradicate or control the spread of invasive plant species in forested areas.

INV-1 Removal of invasive woody plant species

This practice is for the mechanical and/or chemical control of identified species.

1. Invasive species eligible for removal include:
 - a. Japanese barberry
 - b. non-native (shrub) honeysuckles
 - c. common or glossy buckthorn
 - d. Norway maple
 - e. Asiatic/oriental bittersweet
2. The practice is authorized for forested settings and forest edges. It is not authorized for the establishment or maintenance of areas devoted primarily to other uses (e.g. residential, agriculture, recreation areas)
3. Removal must be through mechanical or chemical means, or a combination of the two.
4. The Project Plan must
 - a. document the basis for the treatment method being proposed
 - b. describe how impacts to non-target vegetation will be minimized
 - c. identify the likelihood of re-invasion from other/adjoining areas, as well as means to limit re-invasion.
 - d. identify the need for follow-up treatments.
5. Follow-up treatments to past cost-shared practices may be eligible for additional cost-sharing, but may receive a lower priority for approval based on available funding.

Cost-share rate: 50% of actual cost incurred, not to exceed \$100 per acre.

Agroforestry Implementation

No practices are currently eligible.

Wildfire and Catastrophic Risk Reduction

No practices are currently eligible.

Wildfire and Catastrophic Event Rehabilitation

No practices are currently eligible.